

Wideband Frequency Mixer

HJK-272MH+

Level 13 (LO Power +13 dBm) 600 to 2700 MHz



CASE STYLE: TTT881
PRICE: \$8.95 ea. QTY. (10)

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
LO & RF Power	+20 dBm

Permanent damage may occur if any of these limits are exceeded.

Pad Connections

LO	2
RF	1
IF	3
GROUND	4,5,6

Features

- wide band, 600 to 2700 MHz
- good L-R isolation, 37 dB typ.
- protected by US Patent 6,807,407

Applications

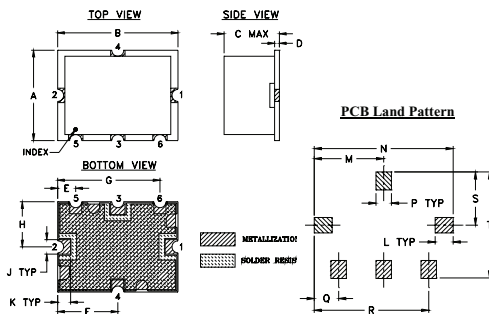
- base stations
- communication systems
- cellular
- PCS
- DCS
- radar

+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications at 25°C

Parameter	Min.	Typ.	Max.	Unit
Frequency Range, RF/LO	600	—	2700	MHz
Frequency Range, IF	10	—	1000	MHz
Conversion Loss	—	7.4	9.0	dB
LO to RF Isolation	28	37	—	dB
LO to IF Isolation	20	27	—	dB
IP3	—	21	—	dBm
RF Input Power at 1 dB Compression	—	+16	—	dBm

Outline Drawing



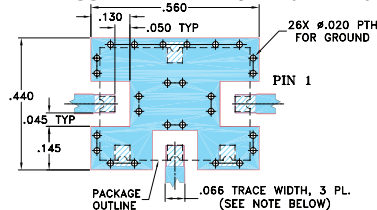
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K
.38	.50	.23	.020	.075	.250	.425	.187	.050	.050
9.65	12.70	5.84	0.51	1.91	6.35	10.80	4.75	1.27	1.27

L	M	N	P	Q	R	S	T	wt.
.070	.270	.540	.060	.095	.445	.208	.415	grams
1.78	6.86	13.72	1.52	2.41	11.30	5.28	10.54	0.8

Demo Board MCL P/N: TB-12 Suggested PCB Layout (PL-079)



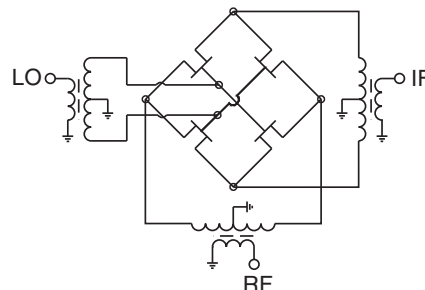
NOTE:

1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 2. THE USE OF SOLDER MASK OVER THE GROUND AREA UNDER THE UNIT AS SHOWN IS RECOMMENDED TO PREVENT POTENTIAL SHORTING. IF USER CHOOSES TO EXPOSE METAL UNDER THE ENTIRE UNIT GROUND PAD FOR IMPROVED GROUNDING, IT IS RECOMMENDED A SOLDER MASK DAM BE APPLIED AROUND EACH GROUND PAD TO ENSURE FILLET AND CONNECTION AT GROUND PADS.
 3. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER), SEE NOTE 2.
■ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)	IP3 (dBm)
RF	LO	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
597.00	627.00	7.44	37.11	36.89	2.58	4.40	22.10
642.50	672.50	7.28	38.22	36.20	2.43	4.39	22.41
733.50	763.50	7.00	39.37	37.18	2.19	4.23	22.27
824.50	854.50	6.88	53.10	35.57	2.04	4.08	22.12
900.00	930.00	6.83	55.81	31.90	1.96	3.94	22.33
1047.00	1077.00	6.68	50.14	29.64	1.88	3.57	21.18
1120.50	1150.50	6.64	45.95	28.86	1.78	3.38	21.47
1267.50	1297.50	6.68	43.96	28.54	1.70	3.09	21.73
1341.00	1371.00	6.70	44.91	29.03	1.67	3.00	21.54
1414.50	1444.50	6.80	47.05	29.45	1.62	2.97	22.02
1561.50	1591.50	7.09	45.49	30.79	1.62	3.07	23.43
1671.75	1701.75	7.26	48.74	32.45	1.49	3.20	23.21
1745.25	1775.25	7.04	50.07	34.48	1.34	3.31	21.92
1818.75	1848.75	6.94	48.54	36.93	1.23	3.40	21.27
1965.75	1995.75	6.75	43.78	40.52	1.08	3.51	21.23
2039.25	2069.25	6.73	42.71	40.82	1.06	3.51	21.12
2186.25	2216.25	6.73	42.66	37.01	1.14	3.40	20.68
2333.25	2363.25	6.92	57.54	33.28	1.31	3.14	21.18
2640.00	2670.00	7.38	44.82	28.76	1.72	2.71	21.95
2800.00	2830.00	7.83	41.68	28.65	1.94	2.58	21.76

Electrical Schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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IF/RF MICROWAVE COMPONENTS

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